

SURGICAL STAPLING INSTRUMENT INCORPORATING AN ARTICULATION JOINT FOR A FIRING BAR TRACK

Abstract of the Invention

A surgical stapling and severing instrument particularly suited to endoscopic articulates an end effector by having a geared articulation mechanism that converts rotational motion from a handle portion. A firing bar longitudinally translates between the handle portion and the end effector. The firing bar head is thickened in order to present an undistorted cutting edge and engagement features to the opposing jaws of the end effector. The firing bar also advantageously includes a thinned or tapered proximal portion in the form of a strip or band that negotiates the articulation mechanism flexibility. To prevent buckling of the firing bar strip during firing, a pair of support plates adjustably flank the firing bar strip through the articulation mechanism. To advantageously prevent pinching, retaining bars are positioned between the support plates above the firing bar to maintain spacing therethrough.